

[EXTERNAL MAIL]H2S exceedance in fuel gas and flare header

Catherine.Elizee <CElizee@lbenergy.com>

Sun 4/25/2021 4:31 PM

To: Verline Marcellin <verline.marcellin@dpnr.vi.gov>

Cc: Craig.Miller <CTmiller@lbenergy.com>; Maria.Aloyo <Maloyo@lbenergy.com>

Good afternoon,

We began exceeding the H2S limit in the fuel gas at 2pm. Operations is responding to the issue. The flare header started exceeding at 4pm. We are cutting charge and putting units on circulation until the source can be isolated. These levels should not be generating odors. A letter will follow.

Thank you

Catherine Elizee

Environmental Superintendent

Limetree Bay Refining, LLC

Limetree Bay Terminals, LLC

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April 30, 2021

Mr. Austin F. Callwood, Director
 Division of Environmental Protection
 Department of Planning & Natural Resources
 45 Mars Hill
 Frederiksted, V.I. 00840-4474

SUBJECT: No. 8 Flare and East Fuel Gas H₂S Exceedance – April 25, 2021

Dear Mr. Callwood:

This letter is submitted in compliance with Condition No. 2.4.5.1 of Limetree Bay Title V permit as a follow-up to the email notifications to Ms. Verline Marcellin of the Division of Environmental Protection on April 25, 2021 at 4:31 PM regarding the H₂S exceedances at the No. 8 Flare and east fuel gas system.

The Continuous Monitoring System (CMS) at the No. 8 Flare recorded H₂S concentrations in excess of 162 ppmv based on a 3-hr rolling average (ref. Title V permit condition 3.2.5.5 & 3.2.5.6) from Sunday, April 25, 2021 from 3:00 PM – 11:00 PM. Additionally, the CMS at the east fuel gas system recorded H₂S concentrations in excess of 0.1 gr/dscf (162 ppm) based on a 3-hr rolling average (ref. Title V permit condition 3.2.2.1.10) on Sunday, April 25, 2021 from 1:00 PM – 10:00 PM.

The following table provides the 3-hr H₂S concentrations at the No. 8 Flare and the east fuel gas system during the exceedance events.

Source		EASTFGDR	FLARE08
Parameter	Unit	H2SPPM (PPM)	H2SPPMD (PPM)
04/25/21	11:00	59	75.1
04/25/21	12:00	106	80.0
04/25/21	13:00	183	81.5
04/25/21	14:00	366	121.7
04/25/21	15:00	514	185.1
04/25/21	16:00	629	725.7
04/25/21	17:00	555	834.5
04/25/21	18:00	496	842.4
04/25/21	19:00	410	360.9
04/25/21	20:00	340	261.4
04/25/21	21:00	255	241.1
04/25/21	22:00	158	203.9
04/25/21	23:00	78	157.7

On April 25, 2021 the No. 3 and No. 4 Sulfur Recovery Units got contaminated with hydrocarbon carryover via the acid gas. Operations blocked in the acid gas header to the sulfur recovery units (SRUs) which overloaded the No. 4 Amine Regeneration unit (4ARU) preventing it from properly removing the H₂S in the fuel gas. The No. 5 Amine Regeneration unit was not operational at the time. Soon after, the 4ARU reboilers overpressured and relieved to the flare.



To mitigate the incident, the No. 7 Distillate Desulfurizer (7DD), No. 9 Distillate Desulfurizer (9DD), and the No. 3 Hydrobon Unit were placed on circulation in order to alleviate the H₂S load to 4ARU.

If you have any questions or need additional information, please contact Maria Aloyo at (340) 692-3781.

Sincerely,

Neil Morgan
VP, Refinery and General Manager
Limetree Bay Refining, LLC

Electronic Copy: Verline Marcellin (DPNR)